

# INFORMATION DISCLOSURE CITATION

PTO-1449

ATTORNEY'S DKT NO.  
027556-430

APPLICATION NO.  
08/938,840

APPLICANT  
Jan-Eric UDDENFELDT et al.

FILING DATE  
September 26, 1997

GROUP  
2745 2-146

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
E-2	2,745,953	5/56	Young			
E-2	3,819,872	6/74	Hamrick			
E-2	4,057,758	11/77	Hattori			
E-2	4,097,804	6/78	Yamaguchi et al.			
E-2	4,112,257	9/78	Frost			
E-2	4,152,647	5/79	Gladden et al.			
E-2	4,211,894	7/80	Watanabe et al.			
E-2	4,222,115	9/80	Cooper et al.			
E-2	4,255,814	3/81	Osborn			
E-2	4,308,429	12/81	Kai et al.			
E-2	4,383,332	5/83	Glance et al.			
E-2	4,398,063	8/83	Hass et al.			
E-2	4,475,246	10/84	Batlivala et al.			
E-2	4,490,830	12/84	Kai et al.			
E-2	4,516,269	5/85	Krinock			
E-2	4,596,042	6/86	Stangl			
E-2	4,633,519	12/86	Gotoh et al.			
E-2	4,642,633	2/87	Dunkerton et al.			
E-2	4,644,560	2/87	Torre et al.			
E-2	4,667,202	5/87	Kamerlander et al.			
E-2	4,670,899	6/87	Brody et al.			

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

DATE CONSIDERED

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## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
<i>SM</i>	4,675,863	6/87	Paneth et al.			
	4,696,051	9/87	Breeden			
	4,696,052	9/87	Breeden			
	4,697,260	9/87	Grauel et al.			
	4,698,839	10/87	DeVaney et al.			
	4,715,048	12/87	Masamura			
	4,718,081	1/88	Brenig			
	4,718,109	1/88	Breeden et al.			
	4,723,266	2/88	Perry			
	4,737,978	4/88	Burke et al.			
	4,759,051	7/88	Han			
	4,765,753	8/88	Schmidt			
	4,771,448	9/88	Koohgoli			
	4,811,380	3/89	Spear			
	4,850,032	7/89	Freeburg			
	4,852,090	7/89	Borth			
	4,856,048	8/89	Yamamoto et al.			
	4,901,307	2/90	Gilhousen et al.			
	4,930,140	5/90	Cripps et al.			
	4,955,082	9/90	Hattori et al.			
<i>✓</i>	4,984,247	1/91	Kaufmann et al.			

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
E-4	5,022,049	6/91	Abrahamson et al.	—	—		
	5,048,059	9/91	Dent	—	—		
	5,056,109	10/91	Gilhousen et al.	—	—		
	5,091,942	2/92	Dent	—	—		
	5,095,531	3/92	Ito	—	—		
	5,101,501	3/92	Gilhousen et al.	—	—		
	5,103,459	4/92	Gilhousen et al.	—	—		
	5,109,390	4/92	Gilhousen et al.	—	—		
	5,124,698	6/92	Mustonen	—	—		
	5,126,748	6/92	Ames et al.	—	—		
	5,128,959	7/92	Bruckert	—	—		
	5,179,571	1/93	Schilling	—	—		
	5,257,283	10/93	Gilhousen et al.	—	—		
	5,265,119	11/93	Gilhousen et al.	—	—		
	5,267,261	11/93	Blakeney, II et al.	—	—		
	5,267,262	11/93	Wheatley III	—	—		
	5,280,472	1/94	Gilhousen et al.	—	—		
	5,383,219	1/95	Wheatley, III et al.	—	—		
	5,437,055	7/95	Wheatley, III	—	—		
	5,452,473	9/95	Weiland et al.	—	—		
✓	5,461,639	10/95	Wheatley, III et al.	—	—		
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
EXAMINER <i>nlr</i>				DATE CONSIDERED 9/8/98			

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<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
E2	5,475,870	12/95	Weaver, Jr. et al.	—	—		
E2	5,485,486	1/96	Gilhausen et al.	—	—		
E2	5,490,165	2/96	Blakeney, II et al.	—	—		
E2	5,509,035	4/96	Teidelmann, Jr. et al.	—	—		
E2	5,513,176	4/96	Dean et al.	—	—		
E2	5,519,761	5/96	Gilhausen	—	—		
E2	5,528,593	6/96	English et al.	—	—		
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
E2	0045882	1/70	Japan	—	—		
E2	2022425	11/71	Germany	—	—		
E2	3012141	10/81	Germany	—	—		
E2	0 040 731	12/81	EPO	—	—		
E2	57-73539	5/82	Japan	—	—		
E2	0 072 479	2/83	EPO	—	—		
E2	0 072 984	3/83	EPO	—	—		
E2	58-111443	7/83	Japan	—	—		
E2	58-159083	9/83	Japan	—	—		
E2	59-176935	10/84	Japan	—	—		
E2	59-212041	11/84	Japan	—	—		
E2	60-42950	3/85	Japan	—	—		
E2	60-52131	3/85	Japan	—	—		
E2	61-171269	8/86	Japan	—	—		
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
EXAMINER <i>[Signature]</i>				DATE CONSIDERED 9/8/98			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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<b>U.S. PATENT DOCUMENTS</b>							
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<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
E2	WO87/01897	3/87	WIPO/PCT	—	—		
E2	62-132444	6/87	Japan	—	—		
E4	0274857 A1	7/88	EPO	—	—		
E2	WO90/13187	11/90	WIPO/PCT	—	—		
E2	WO91/07020	5/91	WIPO/PCT	—	—		
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
E2	Bernhardt, R., <i>User Access in Portable Radio Systems in the Noise Limited Environment</i> , IEEE International Conference on Communications '87, pp. 1-8 (1987).						
E4	Bernhardt, R., <i>RF Performance of Macroscopic Diversity in Universal Digital Portable Radio Communications: Frequency Reuse Considerations</i> , IEEE International Conference on Communications, pp. 65-71 (1986)						
E2	Viterbi, A., <i>Very Low Rate Convolutional Codes for Maximum Theoretical Performance of Spread-Spectrum Multiple-Access Channels</i> , IEEE Journal on Selected Areas in Communications, Vol. 8, No. 4, pp. 641-649 (1990).						
E4	Kerdock, A., <i>A Class of Low-Rate Nonlinear Binary Codes</i> , Information and Control, Vol. 20, pp. 182-187 (1972).						
E2	MacWilliams, F., et al., <i>The Theory of Error-Correcting Codes</i> , Part I, pp. 93-124 (1977).						
E2	MacWilliams, F., et al., <i>The Theory of Error-Correcting Codes</i> , Part II, pp. 451-465 (1977).						
E2	Frenkiel, R., <i>A High-Capacity Mobile Radiotelephone System Model Using a Coordinated Small-Zone Approach</i> , IEEE Transaction on Vehicular Technology, Vol. VT-19, No. 2, pp. 173-177 (1970).						
E2	Shefer, J. et al., <i>An X-Band Vehicle-Location System</i> , IEEE Transaction on Vehicular Technology, Vol. VT-21, No. 4, pp. 117-120 (November, 1972).						
E2	Morinaga, T., et al., <i>Automatic Selection of Fixed Receiving Stations in Mobile Radio Systems</i> , Review of the Electrical Communication Laboratory, Vol. 16, Nos. 5-6, pp. 374-384 (May-June 1968).						
E2	Spilker, J. Jr., et al., <i>The Delay-Lock Discriminator-An Optimum Tracking Device</i> , Proc. Inst. Radio Engrs. 43, pp. 1403-1416 (1961).						
E2	Sergo, J., et al., <i>Analysis and Simulation of a PN Synchronization System</i> , IEEE Transactions Com-18, pp. 676-679 (1970).						
E2	Okumura, Y., et al., <i>Field Strength and its Variability in VHF and UHF Land-Mobile Radio Service</i> , Ref. Electr. Commun. Lab. (Japan) 15, pp. 825-873 (1968).						
E2	Figel, W., et al., <i>Vehicle Location by a Signal Attenuation Method</i> , IEEE Transactions VT-18, pp. 105-109 (1969).						
EXAMINER <i>Wilson</i>				DATE CONSIDERED 9/8/90			

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						Yes	No
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
E2	Nakajima, A., <i>Advanced Mobile Communication Network Based on Signaling System No. 7</i> , International Switching Symposium (1987).						
E2	Turin, G., <i>Introduction to Spread-Spectrum Antimultipath Techniques and Their Application to Urban digital Radio</i> , Proceedings of the IEE, Vol. 68, No. 3 (1980).						
E2	Monsen, P., <i>Digital Transmisssion Performance on Fading Dispersive Diversity Channels</i> , IEEE Transactions on Communications, Vol. COM-21, No. 1 (1973).						
E2	Raith, K. et al., <i>Multi-Path Equalization For Digital Cellular Radio Operating at 300 KBIT/S</i> , Proceedings of the 36 <sup>th</sup> IEEE Vehicular Technology Conference (1986).						
E2	Bennett, M. et al., <i>A Hand-Off Algorithm for Cellular Radio Based on Reed-Solomon Coding</i> , Dialog Abstract from IEEE Colloquium on 'Mobile Radio Networks' (1988).						
E2	Herold, W., <i>A Small-Zone Radio Telephone System with Code Division Multiple Access</i> , Proc. Internat. Zurich Seminar, F6 1-4 (1974).						
E2	Stjernall, J-E et al., <i>Radio Test Performance of a Narrowband TDMA System</i> , Ericsson Radio Systems AB, S-163 80 pp. 293-299 (1987).						
E2	Herold, W., <i>Changing Radio Zones of Fixed Stations by Mobile Subscribers</i> , Communication form AEG-Telefunken Wireless Communications Research Institute, Ulm (Germany), pp. 173-179.						
E2	Schenkel, K., <i>Entwurf Eines Integrierten Digitalen Nachrichtensystems mit Vielfachzugriff fur ein Beliebige Verzweigtes Breitbandnetz</i> , AEU 27, pp. 168-176 (1973).						
E2	Herold, W., <i>Fangverhalten einer Phasenregelschleife mit Sägezahn-Komparator</i> , AEU 25, pp. 226-230 (1971).						
E2	Herold, W., et al., <i>Aufbau und Eigenschaften von Quasiorthogonalen Codekollektiven</i> , AEU 27, pp. 463-470 (1973).						
E2	Herold, W., <i>Nachrichtentechnische Zeitschrift, NTZ</i> , 27, pp. 253-259 (1974).						
E2	Heynisch, B., <i>NTG Gleichkanalfunksysteme fur die Frequenzökonomische Versorgung Grosser Gebiete</i> , NTG-Fachbereich Sprech - und Datenfunk, AEG, Ulm, pp. 41-46 (1985).						
E2	Benndorf, V. et al., <i>Quasissynchroner Gleichwellenfunk-ein Gleichkanalfunk-Verfahren zur Erhöhung der Erreichbarkeit in Mobilfunknetzen</i> , Elektrizitätswirtschaft, Jg. 80, Heft 6, pp. 187-198. (1981)						
EXAMINER 				DATE CONSIDERED 9/25/98			